



New Hampshire
Coastal Program

The Rip Tide



The e-newsletter of the New Hampshire Coastal Program

Summer 2008

■ New Hampshire Department of Environmental Services ■ 50 International Drive Suite 200 ■ Portsmouth, NH 03801 ■
■ (603) 559-1500 ■ www.des.nh.gov/coastal ■ coastal@des.state.nh.us

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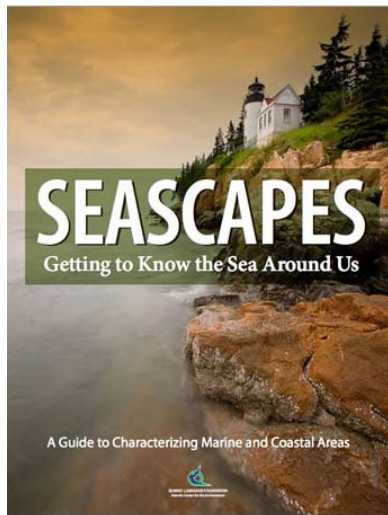
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NEWS

■ Formal collaboration against invasive plant species begins ■

New group takes root in our coastal watershed

Eleven state and federal agencies and nonprofit conservation groups recently established the Coastal Watershed Invasive Plant Partnership, an exciting new partnership to protect New Hampshire's coastal watershed from the spread of invasive plant species, nonnative plants that aggressively outcompete native vegetation and degrade the quality of our lands and waters. The partnership's goal is to cooperate on assessing the extent and controlling these destructive plants.

Approximately 60 attendees helped kickoff the partnership at the Great Bay Discovery Center in May. They heard Department of Environmental Services Commissioner Tom Burack, Coastal Program Manager Ted Diers, and others speak about the threat of invasive plant species and the value of this partnership.

"By cooperating on invasive plant species management, this partnership is helping to protect and restore the ecological integrity of New Hampshire's coastal watershed," said Commissioner Burack.

The signatories to the official agreement used "Phragmites," a locally made pen made from the stalk of one of our most prolific coastal invaders, common reed (*Phragmites australis*), to sign the Partnership Agreement that formally began the partnership.

CWIPP Signatories

- New Hampshire Department of Environmental Services, N.H. Coastal Program;
- New Hampshire Fish and Game Department;
- New Hampshire Department of Transportation;
- New Hampshire Department of Agriculture, Markets & Food;
- New Hampshire Department of Resources and Economic Development;
- Rockingham County Conservation District;
- Natural Resources Conservation Service;
- United States Forest Service;
- The Nature Conservancy;
- Great Bay National Estuarine Research Reserve;
- University of New Hampshire Cooperative Extension.



Participants toured invasive plant species onsite. One hallmark is the plants' ability to spread and displace native vegetation quickly. Here Invasive Species Coordinator Doug Cygan of the N.H. Department of Agriculture describes purple loosestrife, an invasive plant found in wetlands.

After the signing ceremony, attendees were treated to an invasive species plant tour and then watched a weed wrench demonstration, where State Conservationist George W. Cleeck teamed up with Doug Cygan, Invasive Species Coordinator of the N.H. Department of Agriculture to take down an invasive honeysuckle.

There was no shortage of invasive plants examples onsite at the Great Bay Estuarine Research Reserve, illustrating firsthand how widespread and prolific these destructive plants are in our coastal watershed. The invasives tour included purple loosestrife (*Lythrum salicaria*), oriental bittersweet (*Celastrus orbiculatus*), Japanese knotweed (*Polygonum cuspidatum*), multiflora rose (*Rosa multiflora*), common reed (*Phragmites australis*) and honeysuckle (*Lonicera spp.*).

Native plants are being strangled, choked, shaded out, or toppled by invasive shrubs, vines and trees. Invasive plants know no boundaries. They span landscapes and properties, making collaboration essential. In addition to the signing members, organizations, landowners, and municipalities will participate in the Partnership, bringing together resources and



Doug Cygan demonstrates the wrench control technique on an invasive honeysuckle. State Conservationist George W. Cleek gave it a try as well.

expertise to complete invasive species management projects and restore native habitats.

The Partnership is based on the model of a cooperative weed management area, an organizational structure popular in the western U.S., incorporating the following: defined geographic area; involvement and representation from all stakeholders; governed by a steering committee; committed to cooperation; and guided by a comprehensive management plan.

Several similarly modeled invasive plant species partnerships have formed throughout New England, but this is the first time such a partnership has been formalized through a partnership agreement. Signatories to the agreement commit to work together on invasive plant species management for five years. Coastal Program staff have been pivotal in initiating and coordinating the partnership, and will continue to facilitate the group.



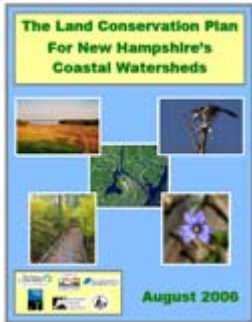
A copy of the partnership agreement is posted at www.des.nh.gov/press.asp or is available upon request. Read about CWIPP in the news in *The Union Leader* at www.unionleader.com/article.aspx?headline=State%20federal+agencies+team+to+fight+invasive+plants&articleId=cd507833-5550-4c2a-b24b-84b1715009c3 and *The Wire* at www.wirenh.com/Features/Features_-_general/the_plant_invasion_200805302945.html

On May 20, signatories to the Coastal Watershed Invasive Plant Partnership agreement formalized their commitment to fight the spread of invasive plant species in New Hampshire's coastal watershed.

From left to right: Brian Doyle, Program Leader, Sea Grant and Water Resources, University of New Hampshire Cooperative Extension; Daryl Burtnett, Executive Director, The Nature Conservancy; Cynthia W. Smith, Chairman, Board of Supervisors Rockingham County Conservation District; George W. Cleek IV, State Conservationist Natural Resources Conservation Service; Thomas S. Burack, Commissioner New Hampshire Department of Environmental Services; Florence Peterson (in front signing the document), signing for Anne F. Archie, Field Representative United States Forest Service; Glenn Normandeau, Executive Director New Hampshire Fish and Game Department; Lorraine Merrill, Commissioner New Hampshire Department of Agriculture, Markets & Food; William J. Cass, Director of Project Development New Hampshire Department of Transportation; Don Kent, N.H. Natural Heritage Bureau Administrator, New Hampshire Department of Resources and Economic Development, signing for Commissioner George Bald; Peter Wellenberger, Manager Great Bay National Estuarine Research Reserve.

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■ New Durham First Community in New Hampshire to Pass Ordinance Based on Land Conservation Plan ■



The town of New Durham recently incorporated a new conservation overlay district into its zoning ordinance that identifies lands having exceptional significance for the protection of natural resources and water quality based on the findings of *The Land Conservation Plan for New Hampshire's Coastal Watersheds*.

The goal of New Durham's ordinance is to guide development away from the highest-quality wildlife habitat, streams, wetlands, and forests.

"The ordinance is not highly restrictive, yet it is effective. While not every acre of the conservation focus areas are preserved, the ordinance does provide flexibility in the design process to allow development in less sensitive areas and preservation of critical resources and habitats," said Julie LaBranche of the Strafford Regional Planning Commission, whose work, partially funded by the Coastal Program and N.H. Estuaries Project, supported the New Durham Planning Board.

While conceptualizing the ordinance, planning board members hesitated to single out any one resource as being a priority. The answer: *The Land Conservation Plan for New Hampshire's Coastal Watersheds*.

Developed through a partnership of organizations, the Plan's goal is to advance the long-term protection of our coastal watershed's irreplaceable natural, cultural, recreational and scenic resources. The plan prioritizes the most valuable resource areas, called conservation focus areas, where outstanding wildlife habitat, wetlands, clean water, productive forests, and recreational opportunities coexist. The plan also includes sample ordinance language, which can be used as a model zoning ordinance. To date, New Durham is the first town to use the plan to inform an ordinance.

Before the conservation overlay district was incorporated into the ordinance, the town had one general zoning district that permitted a minimum lot size of 60,000 square feet (1.4 acres) or greater as required by the soil based lot sizing standards. The new conservation overlay district permits development at a density of one dwelling unit per five acres (with lot sizing as required in the underlying district) and mandatory clustering of development away from the most valuable resources to avoid fragmentation of the conservation focus areas.

"Our town is natural resource rich and this plan really helped us focus because it showed the areas in town where our treasures overlap," said Bob Craycraft, New Durham Planning Board chair.

The planning board voted unanimously to recommend the conservation district area ordinance to town warrant, which was passed at town meeting in March by a 2:1 vote.

Work on preserving natural resources in New Durham built on momentum and interest generated during the master plan process, which began in 2003, when community members voiced their concerns about maintaining high water quality, wildlife habitat and the rural quality of their town. The new ordinance helps put the master plan into action. The town of New Durham also passed a steep slope ordinance in March, complementing the conservation district area ordinance. A riparian buffer ordinance was passed in 2007.

The Land Conservation Plan for New Hampshire's Coastal Watersheds, released in 2006, was developed through a partnership, including the New Hampshire Coastal Program, New Hampshire Estuaries Project, The Nature Conservancy, Society for the Protection of New Hampshire Forests, Rockingham Planning Commission,

and Strafford Regional Planning Commission. The plan identifies 75 conservation focus areas. These conservation focus areas were identified through a systematic, state-of-the-art analysis of a wealth of natural resources data. Collectively, these areas comprise approximately 190,300 acres, or 36 percent of the watershed, of which about 40,000 acres is protected.

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■ Unpaving the Way to Success ■



Conference attendees identified barriers to low impact development implementation during an interactive session. These barriers included cookie cutter municipal regulations and the perception that the technologies are unproven.

Photo: NHEP

The number one threat to water quality today: stormwater. Ken Moraff, deputy director of the Office of Ecosystem Protection at EPA-New England, said “Today’s top three water quality problems are stormwater, stormwater and stormwater,” during his presentation at the “Managing Stormwater with Low Impact Development in Northern New England Conference” on June 12. Conference sponsors included the EPA, UNH Cooperative Extension, and the Coastal Program. It was designed specifically for municipal leaders such as planning boards, conservation commissions, select boards, city councils, zoning boards, municipal engineers, town planners, regional planners, and community leaders.

Impervious surfaces, such as buildings, houses, driveways, parking lots and roads dominate our built landscape and block the flow of water into the earth, where it would otherwise be absorbed like a sponge. Study after study has shown that more impervious surface equals increased runoff,

with polluted water flowing into our lakes, rivers and streams. As more and more land in the Seacoast is converted to impervious surfaces, water quality looms as a giant issue.

About 135 municipal officials, board members, and others in the planning field spent the day-long conference learning from regional experts about how low impact development techniques are a proven approach to decreased runoff, flood protection, and better water quality. Low impact development takes into consideration the hydrology of a site before development and aims to retain it after development. LID techniques, such as bio-retention ponds, tree filters, and porous pavements are high performers with very high infiltration rates.

“In LID, you get to have your cake and eat it too,” said James Houle, program manager for the University of New Hampshire Stormwater Center, noting that the UNH Stormwater Center researchers have yet to see runoff on porous pavement, an alternative to asphalt with much higher infiltration rates. He added that, “There’s no silver bullet,” that solves all runoff and water quality issues. Rather a “treatment train” of numerous methodologies to address stormwater flow and pollutant loads, taking into account the unique topography, soil conditions, and needs of each site, is the solution.

Coastal Program Manager Ted Diers set the tone of the day by getting attendees excited about moving to a new paradigm, one where people involved in site plan design and review at the town, state and federal level understand and embrace low impact development. A combination of science and policy will give us the tools to get us there. But it’s the people who ultimately need to make it happen.

“At first everybody’s gun shy, but then they get gung-ho. It’s a hard sell until everybody’s doing it,” said Rick Cantu, superintendent of the city of Manchester Wastewater Treatment Plant.

In the afternoon, conference attendees had the option to tour the UNH Stormwater Center and observe some of the LID technologies discussed during the presentations or participate in hands-on site plan review training, where they learned how to identify LID techniques on a real site plan.

EPA regulations encourage low impact development; as regulations get tougher, it's harder to meet water quality requirements. For instance, in the future EPA may move beyond its current requirement of 80 percent total suspended solids removal. Houle pointed out that LID systems are getting 99 percent total suspended removal. However, nitrogen and phosphorus, require specific types of LID to be effective. Simply stated, conventional methods won't meet these new water quality standards. More reasons to get pumped up about LID: it looks nicer and saves money in the long run.

Many times town regulations stand in the way of less runoff and better water quality. For instance, zoning standards may apply cookie cutter approaches to parking lot and space requirements, adding more pavement than is really needed on a particular site. Looking at each site on a case by case basis and determining which approach makes the most sense according to the unique circumstances on that site was a theme of the day.

A major question in the minds of many planners remains: will it work here in New England? The UNH Stormwater Center tests technologies right here in our New England climate. For instance, researchers initially thought that infiltration systems would freeze in winter; however, tests revealed that the flowing water thaws the pathway, and it does work in the winter. Interestingly, there is a dramatic reduction in the effectiveness in conventional methods, such as vegetated swales seasonally, according to Houle.

A lack of applied examples often limits the widespread acceptance and implementation of stormwater best management practices. Searchable by state and town, the UNH Stormwater Center-Nonpoint Education for Municipal Officials Innovative Stormwater Management Inventory is a database of New England sites where innovative stormwater BMPs have been implemented. Access the database at www.erg.unh.edu/lid/index.asp.

Infiltration is bliss. Friends don't let friends build detention basins. These may be the new catch phrases of the century.

New Hampshire Partners in LID

For more information about LID visit the UNH Stormwater Web site at www.unh.edu/erg/cstev or contact the organizations on the conference planning committee. The committee included:

Coastal Program and Watershed Assistance
Section of NHDES
N.H. Estuaries Project
Great Bay National Estuarine Research Reserve
University of New Hampshire Stormwater Center
UNH Seagrant/Cooperative Extension
Strafford Regional Planning Commission
Town of Durham
Town of Exeter
Hodgson Brook Restoration Project
N.H. Natural Resource Outreach Coalition
Altus Engineering

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ANNOUNCEMENTS

■ Coastal Program Holds Pepperweed Patrol Trainings ■



Photo: Parker River National Wildlife Refuge

The Coastal Program in partnership with the U.S. Fish and Wildlife Service is looking for volunteers to help with a new project to map, control, and eradicate perennial pepperweed (*Lepidium latifolium*) in the Hampton-Seabrook Estuary. Pepperweed is a major agricultural nuisance in western states and has recently been found to be threatening the ecological integrity of salt marshes throughout southern New England. Currently, the distribution of pepperweed in New Hampshire is unknown, but it is suspected that there are limited populations in the Hampton-Seabrook Estuary. With the help of community volunteers, the Coastal Program hopes to find and eradicate this nuisance weed before it becomes a problem.

Volunteers are needed to help map, pull and monitor this invasive plant in Seabrook, Hampton Falls, Hampton, North Hampton and Rye. Volunteer mappers can work on their own schedules by keeping an eye out for pepperweed in their neighborhoods and/or volunteers can choose to work in teams at pre-scheduled times to help hand-pull pepperweed from infested areas.

The Coastal Program will hold two separate volunteer training sessions at the Hampton Town Hall. The sessions are open to the public with no obligation to volunteer.

To register, or if you are interested in volunteering but can't make either session, please call Kevin Lucey at (603) 559-0026 or email at kevin.lucey@des.nh.gov

What: Volunteer Training on how to identify, map and control perennial pepperweed

When: Friday, June 27, 10 a.m-11 a.m **or** Tuesday, July 1, 7 p.m- 8 p.m.

Where: Hampton Town Hall, 100 Winnacunnet Road, Hampton, N.H; (603) 926-0406

Pepperweed in the News

Read an article on community volunteers and pepperweed at www.boston.com/news/local/articles/2008/06/15/let_the_pepperweed_war_begin/

Directions to the Hampton Town Hall from Locations North:

Take I-95 S

Take ramp onto LAFAYETTE RD(US-1 S) toward **HAMPTON/HAMPTON FALLS** - go **0.3** mi

Turn Left on LAFAYETTE RD(US-1 N) toward **HAMPTON-EXETER/RTE-101/HAMPTON BEACH**- go **0.9** mi

Turn Right on **WINNACUNNET ROAD** - go **0.2** mi

Arrive at 100 **WINNACUNNET ROAD**, HAMPTON, on the Left

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■ Coastal Estuarine Land Conservation Program Request for Proposals FFY09 ■



The request for proposals is intended to provide information to NOAA on the land protection projects that are available for funding in New Hampshire's [coastal watershed](#) for FFY09. As a result of this RFP, the Coastal Program will forward to NOAA three projects requesting no more than \$3 million per project, which will be ranked in a national competition. The Coastal and Estuarine Land Conservation Program, which was established in 2002 by Sen. Judd Gregg in coordination with state and federal land experts, gives priority to lands that can be effectively managed and that have significant ecological value.

To be considered for funding, projects must be consistent with the draft NHCELCP Plan. This was the result of a partnership with the N.H. Estuaries Project, Society for the Protection of N.H. Forests, The Nature Conservancy, and the Strafford and Rockingham regional planning commissions. The plan identified priority areas for CELCP funding within the coastal watershed and is in final review by NOAA. The draft plan can be found at www.des.nh.gov/coastal/CoastalEstuarine.html.

The due date for all proposals is 4 p.m., June 27, 2008.

For detailed project and applicant eligibility requirements and how to apply, please visit www.des.nh.gov/coastal/CoastalEstuarine.html

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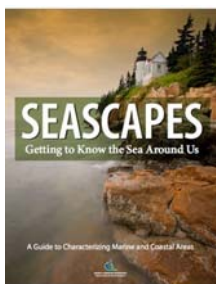
NEW PUBLICATIONS & PLANNING TOOLS

■ Coastal Public Access Map ■



Looking for ways to get out and enjoy our coast this summer? Try the Coastal Public Access Map, produced by the Coastal Program. This map provides information on boating and other public access opportunities in the coastal zone. View online at www.des.nh.gov/Coastal/Resources/documents/coastalaccessmap_final.pdf or contact Mary Power at (603) 559-1500 or mary.power@des.nh.gov for hardcopies.

■ Seascapes: Getting to Know the Sea Around Us. A Guide to Characterizing Marine and Coastal Areas ■

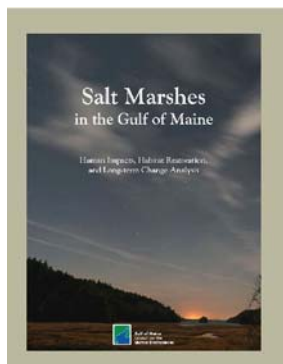


The need and desire for information about the sea and shore has never been greater. Generally, the goals of a marine area characterization are to gather and integrate information about a marine area, communicate the information, and use the information to guide resource management decisions.

This guide describes how to characterize a marine area in a meaningful way, what information is needed, how the information should be obtained and organized, and how to communicate findings effectively. Download the guide at www.gulfofmaine.org/seascapes/.

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■ Salt Marshes in the Gulf of Maine ■



Beautifully illustrated with full-color photographs and drawings, this 42-page booklet provides an overview of the valuable ecological functions of healthy salt marshes, human impacts on salt marshes, methods for restoring salt marsh habitats, and the need for a regional salt marsh monitoring program.

The publication is intended as a tool for resource managers, lawmakers, non-governmental organizations, educators, and others interested in understanding salt marshes as a key element of the Gulf of Maine ecosystem.

Visit www.gulfofmaine.org/saltmarsh to download a copy.

■ Coastal Technology Progress Reports ■

The UNH/NOAA Cooperative Institute for Coastal and Estuarine Environmental Technology has posted spring 2008 progress reports for its environmental technology development projects online. These projects are dedicated to developing tools that help coastal communities be more resilient in the face of increasing development and climate change. The focus areas include improved tools for land use planning, habitat restoration and protection, and water quality monitoring. These reports, submitted by the projects' investigators, detail their progress in gathering data, meeting research objectives, reaching out to coastal management, and engaging the intended users of the tools they are developing.

Projects featured include two New Hampshire initiatives, one on best management practices by the UNH Stormwater Center and the other by the Great Bay NERR, which is working on a project to disseminate a toolbox of land use planning geospatial resources in order to assist coastal communities in making decisions that protect environmental character and water quality. Learn more at http://ciceet.unh.edu/news/releases/spring08_progress_reports/index.html

The Cooperative Institute for Coastal and Estuarine Environmental Technology is a partnership of the National Oceanic and Atmospheric Administration and the University of New Hampshire. It is dedicated to fostering the development of tools for clean water and healthy coastal environments nationwide. <http://ciceet.unh.edu>

■ Gulf of Maine Times ■

The *Gulf of Maine Times* is a triennial newspaper that helps foster appreciation, understanding and preservation of the Gulf of Maine watershed and marine environment. Each issue connects readers with people, science and technology, helping to improve the way the Gulf's environment is monitored and protected. The publication is supported by the National Oceanic and Atmospheric Administration and the Gulf of Maine Council on the Marine Environment, a U.S.-Canadian partnership of government and non-government organizations working to maintain and enhance environmental quality in the Gulf of Maine to allow for sustainable resource use by existing and future generations. The summer issue of the *Times* will be available at www.gulfofmaine.org on June 27. To subscribe, visit www.gulfofmaine.org/quickscription.php

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About this e-newsletter

The Rip Tide is NHCP's quarterly e-newsletter.

All subscribers' e-mail addresses on this list are kept confidential and are not shared by NHCP.

Contact Catherine Coletti, editor, at (603) 559-0024 or Catherine.coletti@des.nh.gov with questions or comments.

About NHCP

NHCP is a federally approved coastal program authorized under the Coastal Zone Management Act and is administered by the New Hampshire Department of Environmental Services. NHCP strives to maintain a balance between the use and preservation of coastal resources. Through partnerships, funding and science, NHCP works to improve water quality and decision making in 42 coastal watershed communities, supports maritime uses, and restores coastal wetlands.